Meeting of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction

24 July 2018

English only

2018 Meeting
Geneva, 4-7 December 2018

Meeting of Experts on Cooperation and Assistance, with a Particular Focus on Strengthening Cooperation and Assistance under Article X
Geneva, 7-8 August 2018
Item 4 of the provisional agenda
Consideration of the reports of the States Parties on their full and comprehensive implementation of all provisions of Article X

Australia's Article X report for 2016 and 2017

Submitted by Australia

I. Introduction

1. Australia is a strong supporter of the BWC, including implementation of Article X which reinforces the security objectives of the BWC, as well as encouraging peaceful uses of biological science and technology. Australia's commitment to countering the proliferation of weapons of mass destruction and guarding against global health risks are clearly articulated in the 2017 Foreign Policy White Paper.

2. Facilitating the international exchange of equipment, materials and scientific and technological information for the peaceful use of the life sciences helps to prevent the global spread of infectious diseases. International cooperation also builds capacity to respond to disease outbreaks (whether caused naturally or through the hostile use of biological agents or toxins) and can provide incentives for States to accede to the BWC.

3. The Australian Government supports a range of programs that facilitate research, development and commercialisation in the life sciences, including industrial and agricultural biotechnology. Australian Government initiatives complement the work of Australian industry and academic and research institutions in the biological sciences.

4. Australia's annual BWC Confidence Building Measures (CBM) submissions provide detailed information on relevant research and other activities undertaken within Australian Government agencies. These submissions are publicly available on the BWC website. Many of the programs and activities reported in our CBM submissions also meet Australia's obligations under Article X to build capacity to prevent the deliberate use of disease as a weapon as well as disease prevention and addressing pandemics and emerging infectious diseases.

II. Countering biological terrorism and counter-proliferation

5. Australia continues to cooperate with our partners to strengthen capacity in the Indo-Pacific region. Some current examples are highlighted below:

- Australia co-funded and participated in a workshop on biosafety and security, including tangible and intangible technology transfers, co-hosted by the UN Regional Centre for Peace and Disarmament in Asia and the Pacific and the Government of Thailand in Bangkok in 2017.
- Australia is participating in two of the 11 Global Health Security Agenda (GHSA) packages as a contributing country. One of these is the "Linkages and Multi-sectoral Rapid Response Action" package which will enable a country to conduct a rapid whole-of-government response in the event of a biological incident that is suspected or confirmed to be deliberate. This includes linking public health and law enforcement and providing or requesting effective and timely international assistance.
- Australia continues to participate in international and domestic counter-terrorism and counter-proliferation CBR capability-building exercises and training programmes. This includes the ongoing provision of funding for the delivery of a quality assurance program to enhance laboratory capacity and capability to test for biological agents of security concern within Australia and other specified overseas laboratories.
- The Australian Animal Health Laboratory (AAHL) engages with a number of laboratory networks, at the national level (including the Australian Public Health Laboratory Network and the Australian (Counter) Bioterrorism Laboratory Network) and at the international level (including other BSL4 Laboratories). These collaborations encompass a range of activities including sharing technical knowledge, training opportunities, developing procedures and agreements for sharing of samples etc.
- As an international reference laboratory, AAHL is requested by diagnostic laboratories and sponsoring agencies (e.g. the Food and Agriculture Organization [FAO], the International Atomic Energy Agency (IAEA) and the World Organisation for Animal Health [OIE]) to provide reference controls to diagnostic laboratories internationally. This material is despatched in full compliance with Australia's strict export controls.
- Experts from AAHL have also participated in international seminars and exercises, including the 2nd OIE Global Conference on Biological Threat Reduction "Enhancing Health and Security for All" in 2017 and UNSGM training courses.
- Australia continues to develop a medical countermeasures capability that benefits from collaboration with our partners in the defence and public health community. A nation-wide audit of Australia's medical countermeasures capabilities in 2017 has provided a wealth of data that will inform efforts to build our preparedness against chemical, biological and radiological threats, emerging infectious diseases and pandemics. The results of the audit are being used to shape recommendations on how to sustain and grow a robust Australian medical countermeasures capability. The revision of Australia's Smallpox Plan is expected to be finalised in 2018, pending incorporation of modelling which is currently underway. The modelling will inform both planning and National Medical Stockpile holdings.
- Australia has also developed a new approach for the toxins Abrin and Ricin. The Abrin and Ricin Plan, which is expected to be finalised in 2018, sets out the agreed mechanisms through which coordination of the national health response to a

release of either of these toxins would occur. The Plan aims to promote more effective planning, better preparedness, and a more rapid, integrated and consistent health response to a release of Abrin or Ricin.

6. In collaborating with international partners, Australia continues to underline the need to strike an appropriate balance between enabling peaceful biological research consistent with the objectives of the BWC, and minimising the possibility of misuse of this research and associated biological materials, equipment and technology. Biosafety protocols and ensuring the security of toxins and pathogens is a fundamental element of our international cooperation.

III. Disease prevention and addressing pandemics and emerging infectious diseases

7. As we have highlighted in earlier reports, Australia is committed to building capacity to address pandemics and emerging infectious diseases in our region.

8. For example, Australia's new Health Security Initiative aims to improve regional health security through promoting strengthened health systems and innovative research that can address emerging infectious diseases and drug resistance. The Initiative will also work to accelerate access to new and effective tools, assist regional collaboration, and build people-to-people links and networks. These efforts support Australia's implementation of BWC Article X, and recognise that the prevention, detection and control of pandemics and emerging infectious diseases are a global public good that no single country can provide on its own.

9. Investments under the Initiative, totalling AUD300 million over five years (2017-2022), will be managed by Australia's newly established Indo-Pacific Centre for Health Security (http://indopacifichealthsecurity.dfat.gov.au/Pages/default.aspx) and includes:

- up to AUD75 million for a Product Development Partnerships Fund to support the development of innovative treatments and diagnostics for malaria and tuberculosis, with a particular focus on drug-resistant forms of these diseases, and the development of products for the control of vectors that spread infectious diseases;
- AUD16 million for applied health systems and policy research led by Australian institutions;
- AUD20 million for the World Health Organization's (WHO) Health Emergencies Programme;
- a partnership between the Department of Foreign Affairs and Trade and the Department of Health's Therapeutic Goods Administration to strengthen regulatory capacity in the region;
- a new health security corps to place Australian public health professionals in non-clinical, capacity-building roles in the region, with the aim of supporting up to 20 volunteer placements each year;
- supporting fellows from across the ASEAN region to undertake a two-year Master of Philosophy in Applied Epidemiology at the Australian National University, increasing capacity in the region to track and respond to pandemic and infectious disease threats;
- exploring broader deployment options to support short-term paid deployments of health professionals as part of coordinated outbreak response mechanisms; and

- exploring options for supporting pandemic and outbreak response financing mechanisms.

10. In addition, the Centre is currently in the process of identifying priorities for county- and regional-level assistance to South-East Asia, Papua New Guinea and the Pacific Island countries. Two separate scoping projects are underway, one visiting Fiji, Papua New Guinea, the Solomon Islands and Samoa; and the other visiting seven countries in the South-East Asia region. Outcomes from these consultative projects will be used to inform the Centre's future strategic priorities and partnerships in the region.

11. In addition to the Health Security Initiative, a number of Australian Government agencies provide technical support and capacity building to combat infectious diseases in partner countries. Agencies often work in close collaboration with regional partners and multilateral organisations such as the WHO, OIE and the FAO.

12. Some practical examples of current and recent Australian activities include:

Department of Health

- In 2015, Australia contributed AUD8 million over three years to the World Bank to establish a Multi Donor Trust Fund to support the financing of health systems by national governments to address a range of infectious diseases and health threats.
- Australia is also contributing to the GHSA package focussing on preventing antimicrobial resistance (AMR). Our 'One Health' approach coordinates Australia's efforts across animal and human health, agriculture and food sectors to reduce, monitor and respond to AMR. The objectives of Australia's National Antimicrobial Resistance Strategy 2015-2019 focus on: infection prevention and control; surveillance; antimicrobial stewardship; international engagement; communication and education; research and development; and governance.
- Australia makes a significant contribution to global pandemic preparedness by collecting, sharing and analysing local influenza viruses to provide data to the WHO Global Influenza Surveillance and Response System (GISRS), through the Melbourne-based WHO Collaborating Centre for Reference and Research on Influenza (WHO CC) and three National Influenza Centres nationwide. The GISRS holds data on currently circulating influenza viruses in the global human population which is then used by the WHO to recommend the appropriate viruses to be included in annual seasonal influenza vaccines. It also serves as a global alert mechanism for the emergence of influenza viruses with pandemic potential.
- Australia continues to support the WHO CC through a funding agreement with Melbourne Health first established in 2005. The WHO CC also provides support and training opportunities to laboratories in the Asia-Pacific region that contribute to GISRS.
- Australia is a signatory of the Pandemic Influenza Preparedness Framework (PIP Framework), and strongly supports WHO's implementation, particularly in the Western Pacific Region. The PIP Framework is a partnership between the WHO, WHO member states, industry and other stakeholders aiming to improve and strengthen the sharing of influenza viruses with human pandemic potential. It also increases the access of developing countries to vaccines and other pandemic-related supplies, and pandemic preparedness capacities such as laboratory capability and surveillance systems.
- In 2017, Australia provided AUD2 million to the Coalition for Epidemic Preparedness Innovations (CEPI), to support development of vaccines to fight emerging infectious diseases.

- Australian experts continue to participate in Joint External Evaluations (JEEs), which incorporate GHSA competencies. The JEEs assess country capacity to meet the International Health Regulations.

Department of Agriculture and Water Resources (DAWR)

13. Australia has a proud history of helping to address the spread of diseases from animals to humans in South-East Asia. We made a significant contribution to the *Stop Trans boundary Animal Disease and Zoonoses* (STANDZ) Initiative through the OIE (AUD12.79 million 2011-2017), which ceased in December 2017. We are also working with the Government of Indonesia through the *Australia-Indonesia Partnership for Emerging Infectious Diseases* (AIPEID) to strengthen human and animal health systems (AUD9.9 million 2015-2018).

Australian Animal Health Laboratory (AAHL)

14. As an international reference laboratory within the Commonwealth Scientific and Industrial Research Organisation (CSIRO), AAHL provides scientific and technical assistance to the South-East Asian, South Asian and Pacific regions for diagnosis, disease investigation, laboratory capacity building and research for a range of emergency animal diseases (including zoonoses) in terrestrial and aquatic species. In its work, AAHL collaborates with a range of national and international partners including the OIE, the FAO, the Australian Centre for International Agricultural Research (ACIAR), and DAWR.

15. Some of AAHL's activities in 2016 and 2017 that contributed to Australia's implementation of Article X in the areas of disease prevention and addressing pandemics and emerging infectious diseases are outlined below:

- Provision of training on biosafety and biosecurity to undergraduates, postgraduates and professional groups through seminars and national and international training courses. AAHL also offers placements for postgraduate students and visiting fellows.
- The AAHL facility is used for the evaluation of new therapeutics/vaccines for emerging and emergency diseases, as pre-clinical trials.
- Provision of in-house biosafety training courses and management of bio-risk. AAHL also delivers capacity building, including on biosafety, through support to laboratories in Asia.
- Research on exotic and emerging terrestrial and aquatic animal health diseases, including zoonotic agents – particularly in the areas of pathogenesis, development of diagnostic assays and reagents and assay validation.

16. AAHL also provides technical assistance through twinning arrangements:

AAHL-National Institute of Animal Health (NIAH, Thailand)

- AAHL partners with NIAH Thailand to enhance and deliver emerging infectious disease (EID) preparedness in the ASEAN region for potential public health and food security threats arising from animal populations. The project is designed to enhance capability in the structured investigation of new and emerging diseases and zoonotic disease outbreaks. It includes technology transfer with supporting quality assurance for known dangerous zoonoses and the development of systems for ongoing consultation between NAIH and AAHL.

AAHL-Regional Animal Health Office No.6 (RAH06, Vietnam)

- The aim of the project is to establish an enhanced capacity for the diagnosis and characterisation of emerging infectious diseases (EID) of pigs in the South-East Asian region at RAHO6. The potential for public health and food security threats arising from animal populations is well understood. Farmed pigs are susceptible to a range of zoonotic infections as well as production-limiting diseases. This project, to be implemented over three years, will enhance the capabilities of RAHO6 for the laboratory diagnosis of emerging diseases in pigs, including zoonotic diseases, providing technology transfer and supporting quality assurance.

AAHL's cooperation with OIE:

- AAHL has participated in a range of OIE ad-hoc groups including Veterinary Biobanking, Biological Threat Reduction and High Throughput Sequencing, Bioinformatics and Computational Genomics as well as OIE regional meetings on the Control of Avian Influenza and the OIE Reference Centres for Asia and the Pacific.
- AAHL has OIE Collaborating Centre designations for New and Emerging Diseases, Laboratory Capacity Building and Diagnostic Test Validation Science in the Asia-Pacific Region.

AAHL cooperation with the WHO:

- Involvement in ad-hoc group on Zoonotic Diseases: Updating the Tripartite Toolkit for national implementation of multi-sectoral approaches for Preparedness, Detection, Assessment, and Response;
- Participation and involvement as facilitator in GOARN (Global Outbreak and Response Network) in the Philippines and Australia in 2017;
- Participation in a WHO Consultative Meeting on High Containment Laboratory Networking in 2017.

AAHL cooperation with the FAO:

- Technical backstopping missions to participating laboratories in Asia to strengthen emergency preparedness for Highly Pathogenic Avian Influenza (HPAI)). The aim was to strengthen laboratory diagnostic capacity and ensure implementation of a standardised protocol for diagnosis for priority animal diseases under an accredited quality assurance system. Missions were undertaken to 10 countries (16 laboratories) in 2016 and 11 countries (16 laboratories) in 2017 in South and South-East Asia;
- Provision of proficiency testing under contract by FAO to 14 countries (19 laboratories) in 2016/2017 for Avian and Swine diseases;
- AAHL worked with FAO Indonesia in 2016 and 2017 to facilitate and implement the Influenza Virus Monitoring (IVM) platform, IVM Online, including the provision of laboratory support and training. The IVM Online platform enables Disease Investigation Centres to track and record Influenza isolates and assess and characterise in real time against reference strains to ensure currency of vaccine seed stocks used in Indonesia's vaccination strategy for Avian Influenza. This work also aligns the development of the IVM Online platform with the wider requirements of Indonesia's Directorate of Animal Health and the requirements of the funding partner, USAID's Emerging Pandemic Threats 2 ("EPT-2") project.

- AAHL sits on the Laboratory Technical Advisory Group (Lab-TAG) established by and supported by FAO. This group consults and advises the Association of Southeast Asian Nations (ASEAN) network laboratories in relation to priority diseases in the region to better enable early diagnosis and preparedness. This activity sets focal point priorities for the ASEAN network to consider annually.

IV. National High Security Quarantine Laboratory

17. Australia's National High Security Quarantine Laboratory (NHSQL) is operated by the Victorian Infectious Diseases Reference Laboratory (VIDRL). The NHSQL is a physical containment level 4 (PC4) facility designed for microorganisms that require the maximum level of containment.

18. The NHSQL provides laboratory space, testing methods and personnel capable of safely handling viruses causing viral haemorrhagic fever (the Ebola, Lassa, Marburg, Crimean-Congo and Rift Valley fever viruses), variola virus and other infections associated with significant morbidity and mortality.

19. The NHSQL has a key role in Australia's preparedness for a national health emergency. It also has the capacity to accept samples from other countries in our region in the event of a large outbreak, and provided assistance during the recent Ebola and Zika outbreaks.

V. Australian Federal Police (AFP)

20. In July 2017, following a request to establish a Biomedical Laboratory unit in Jakarta, AFP Forensics and the Victorian Institute for Forensic Medicine (VIFM) visited Indonesia to provided technical assistance and advice. During the visit, VIFM provided technological advice in relation to establishing a histology and toxicology capability, while AFP provided technical assistance with regard to equipping and constructing a microbiology laboratory. Such a laboratory, when established, will not only be of benefit from a medical and law enforcement perspective but will also provide Indonesia with a better capability of detecting and analysing pathogens relevant to the BWC.

21. AFP continues to promote the exchange of technical information, consistent with the implementation of Article X through participation in technical workshops and conferences in the ASEAN region. In March 2017, AFP participated in a conference and workshop in Singapore that included technical assistance relating to CBRNe issues including:

- Analytical Laboratories in Biological Investigations: How to Ensure Scientific and Political Acceptance;
- Lessons Learned from the experience of the French Military EBOV Laboratories;
- Studying the metabolome of Ricinus Communis for attribution;
- Model of Integrated Bio-surveillance through Strategic Partnership;
- Protecting the Aviation Industry Against CBRNe Threats;
- Medical Countermeasures for CBRNe Public Health Emergencies;
- Technical discussions involving capability of Bio-Threat Panel Film Array for agent detection and identification.

VI. Offers of Assistance

22. As Chair of the Australia Group (AG) we have submitted to the BWC Implementation Support Unit an 'offer of assistance', on behalf of the AG membership, enabling States Parties to request assistance from the AG membership about the implementation of export controls for chemical and biological transfers.

23. In February 2017, the AG hosted a Dialogue and outreach for Latin American countries (Brazil, Chile, Colombia, Ecuador, Paraguay and Uruguay). The Dialogue reaffirmed the AGs commitment to non-proliferation and the security of sensitive materials against any attempts to use them for biological and chemical weapons. The Dialogue highlighted the importance of being able to respond to the dynamic challenges the world faces. Cooperation at global, regional, and sub-regional levels was needed for effective control of dual use materials. Dialogues present an important opportunity for the AG to extend its coordinated export control regime and build support for global counter-proliferation efforts.

24. In addition to the above-mentioned Latin American countries, in 2016-2017 the AG conducted various dialogue and capacity building activities with Hong Kong, Kazakhstan, Malaysia, Myanmar, Serbia, Taiwan, Venezuela and Vietnam. As Chair and an active member of the AG, Australia continues to collaborate with our international partners on export controls.

25. Australia has been a longstanding advocate for universal membership of the BWC. In 2017, we delivered a presentation at a universalisation workshop in the Pacific region, hosted by Fiji.

26. As in previous years, we have continued to support the attendance of delegates from developing countries at BWC-related events through providing voluntary funding to the BWC Sponsorship Program.

VII. Conclusion

27. This report provides a snapshot of some of the collaborative work Australia has undertaken in 2016 and 2017, and complements our previous reports on the implementation of Article X. Technical assistance, education, training and capacity building are also provided by Australian states and territories, research bodies and academic institutions but this important work falls outside the scope of the current report which is limited to activities of the Australian Government.

28. Australia's BWC-related cooperation and assistance makes a strong contribution to public health and disease prevention, surveillance and detection, international cooperation in the biological sciences and improvements in biosafety and biosecurity. Australia's continuing commitment to meeting its Article X obligations, as demonstrated by the examples selected for inclusion in this report, further helps to demonstrate the way enhanced international cooperation and assistance can reinforce the security objectives of the BWC.